

Listing of Claims:

Please amend claims 1, 4, 5, 6, 21 and 22.

1. (Currently Amended) A method of identifying relationships among physiological traits ~~determinants~~ within a set of physiological traits ~~determinants~~, comprising:

- (a) determining a correlation value between two physiological traits ~~determinants~~ for all possible pairs of physiological traits ~~determinants~~ within said set,
- (b) constructing a correlation matrix using said correlation values;
- (c) constructing a clustered correlation matrix from said correlation matrix by clustering said physiological traits ~~determinants~~ using a clustering method, and
- (d) identifying relationships among said physiological traits ~~determinants~~ from said clustered correlation matrix.

2. (Original) The method of claim 1, wherein said clustering method is selected from the group consisting of clustering based on statistical methods, clustering based on known physiological relationships, and clustering based on known genetic linkages.

3. (Original) The method of claim 1, further comprising constructing a colored clustered correlation matrix using a plurality of colors, wherein each color indicates a selected degree of correlation, and wherein patterns of colors in said clustered correlation matrix are used to identify said relationships.

4. (Currently Amended) The method of claim 1, wherein said set of physiological traits ~~determinants~~ comprises 10 traits ~~determinants~~.

5. (Currently Amended) The method of claim 1, wherein said set of physiological traits ~~determinants~~ comprises 20 traits ~~determinants~~.

6. (Currently Amended) The method of claim 1, wherein said set of physiological traits ~~determinants~~ comprises 50 traits ~~determinants~~.

7. (Withdrawn) A method of assessing the physiological response of an organism or organisms to a challenge, comprising:

(a) constructing a clustered correlation matrix using a set of physiological determinants, wherein correlation values for all pairs of determinants in said set were obtained prior to said challenge,

(b) constructing a clustered correlation matrix using said set of physiological determinants, wherein correlation values for all pairs of determinants in said set were obtained during or subsequent to said challenge, and

(c) comparing the clustered correlation matrices of (a) and (b) to assess the physiological response of said organism to said challenge.

8. (Withdrawn) The method of claim 7, wherein said correlation values are represented by a plurality of colors, wherein each color indicates a selected degree of correlation, and wherein patterns of colors in said clustered correlation matrices are used to compare said clustered correlation matrices.

9. (Withdrawn) The method of claim 7, wherein said challenge is selected from the group consisting of a drug administration, an allelic substitution, and an environmental stressor.

10. (Withdrawn) A method of assessing the change in physiological state of an organism or organisms over time, comprising:

(a) constructing a clustered correlation matrix using a set of physiological determinants, wherein correlation values for all pairs of determinants in said set were obtained at a first time,

(b) constructing a clustered correlation matrix using said set of physiological determinants, wherein correlation values for all pairs of determinants in said set were obtained at a second time, and

(c) comparing the clustered correlation matrices of (a) and (b) to assess the change in physiological state of said organism from said first time to said second time.

11. (Withdrawn) The method of claim 10, wherein said correlation values are represented by a plurality of colors, wherein each color indicates a selected degree of correlation, and wherein patterns of colors in said clustered correlation matrices are used to compare said clustered correlation matrices.

12. (Withdrawn) A method of partitioning organisms into homogeneous subclasses, said method comprising comparing the physiological profiles of said organisms and partitioning said organisms into homogeneous subclasses based on differences in said physiological profiles.

13. (Withdrawn) The method of claim 12, wherein said organisms exhibit multifactorial disease condition.

14. (Withdrawn) The method of claim 12, further comprising performing expression profiling and further partitioning said organisms into said homogeneous subclasses based on said expression profiling.

15. (Withdrawn) A method of assigning an organisms to a homogeneous subclass of organisms, said method comprising generating a physiological profile of said organism and identifying said organism as belonging to said homogeneous subclass based on said physiological profile.

16. (Withdrawn) The method of claim 15, wherein said homogeneous subclass of organisms exhibits a multifactorial disease condition.

17. (Withdrawn) A method of determining the contribution(s) of a gene or genes to a physiological process in an organism, comprising:

(a) generating an expression profile and a physiological profile of said organism before a challenge,

(b) generating an expression profile and a physiological profile of said organism during or after said challenge, and

(c) comparing the expression profile and physiological profile of (a) with the expression profile and physiological profile of (b), wherein said gene or genes is identified by the difference or differences in the expression profiles of (a) and (b); and wherein the physiological contributions of said gene or genes is indicated by changes in the physiological profiles of (a) and (b).

18. (Withdrawn) A method of determining the contribution(s) of a gene or genes to a physiological process in an organism, comprising:

(a) generating an expression profile and a physiological profile of said organism at a first time,

(b) generating an expression profile and a physiological profile of said organism at a second time, and

(c) comparing the expression profile and physiological profile of (a) with the expression profile and physiological profile of (b), wherein said gene or genes is identified by the difference or differences in the expression profiles of (a) and (b); and wherein the physiological contributions of said gene or genes is indicated by changes in the physiological profiles of (a) and (b).

19. (Withdrawn) A computer-readable medium comprising a physiological profile.

20. (Withdrawn) The computer-readable medium of claim 19, wherein said physiological profile comprises a plurality of colors, wherein each color indicates a selected degree of correlation.

21. (Currently Amended) A computer-readable medium having stored thereon computer-readable instructions for performing the method of claim 1, 7, 10, 17, or 18.

22. (Withdrawn) A method of determining whether a hypertensive patient is a modulator or non-modulator, said method comprising determining the allelic status of a gene encoding rennin in said patient.

23. (Withdrawn) A method of determining whether a patient is at risk for hypotension following administration of a vasoconstrictor agent, said method comprising determining the allelic status of a gene encoding NOSII in said patient.

24. (Withdrawn) A method of determining whether a patient is at risk for hypotension following administration of a vasoconstrictor agent, said method comprising determining the allelic status of a gene encoding NOSII in said patient.

25. (Currently Amended) The method of claim 1, wherein a first member of each pair of physiological traits ~~determinants~~ is derived from an individual and a second member of each pair of physiological traits ~~determinants~~ is the mean of physiological determinants from a population of individuals, and wherein determining each said correlation value comprises measuring the difference between said first member and said second member.

26. (Withdrawn) A method for modifying or supplementing actuarial tables for life and health insurance, comprising

(a) identifying homogeneous subclasses of humans according to the method of claim 12, and

(b) modifying or supplementing said actuarial tables based on said identified homogeneous subclasses.